

BEFORE THE
Federal Communications Commission

WASHINGTON, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of

Redevelopment of Spectrum to
Encourage Innovation in the Use
of New Telecommunications
Technologies

)
)
) ET Docket No. 92-9
)
) RM-7881
) RM-8004

To: The Commission

**COMMENTS
OF THE
AMERICAN PETROLEUM INSTITUTE**

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Dated: December 11, 1992

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SUMMARY

The American Petroleum Institute (API) reiterates its position that reallocation of the frequency band 1850-2200 MHz is not in the public interest. However, in the face of the Federal Communications Commission's (Commission) decision to order such a reallocation, API generally supports adoption of the microwave spectrum sharing and rechannelization plans proposed by the Commission in the ET Docket No. 92-9 Further Notice of Proposed Rule Making. The Commission is urged to carefully review optional channelization plans and to base its decision on the twin goals of spectrum efficiency and maximum equipment marketplace competition.

API is concerned that the Commission has initially rejected providing for displaced 2 GHz licensees any spectrum relief below 3700 MHz. The Commission is urged to carefully review this issue again and provide relief in the bands 1710-1850 MHz or 3600-3700 MHz, or elsewhere below 3 GHz, for existing users having long paths that must be reaccommodated.

API urges the Commission to promptly adopt appropriate spectrum accommodations and channelization plans to reaccommodate users being displaced from the 2 GHz band.

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The American Petroleum Institute (API), by its attorneys and pursuant to Section 1.415 of the Rules and Regulations of the Federal Communications Commission (Commission or FCC), hereby submits these Comments in response to the Further Notice of Proposed Rule Making adopted by the Commission on August 5, 1992 in the above-styled proceeding.^{1/}

^{1/} Further Notice of Proposed Rule Making, (FCC 92-357), ET Docket No. 92-9, 57 Fed. Reg. 42916 (September 17, 1992). The time for filing Comments in this proceeding was extended to December 11, 1992. Order Extending Time For Comments And Reply Comments, DA 92-1599, Released November 24, 1992.

I. PRELIMINARY STATEMENT

1. API is a national trade association representing over 200 companies involved in all aspects of the oil and natural gas industries, including exploration, production, refining, marketing and transportation of petroleum, petroleum products and natural gas. Among its many activities, API acts on behalf of its members as a spokesperson before federal and state regulatory agencies. The API Telecommunications Committee is one of the standing committees of the organization's General Committee on Transportation. The Committee evaluates and develops responses to state and federal proposals affecting telecommunications facilities used in the oil and gas industries.

2. API's member companies are authorized by the Commission to operate significant numbers of point-to-point microwave systems in the Private Operational-Fixed Microwave Service (OFS), including many transmitters licensed in the 1850-2200 MHz band ("2 GHz band") that has been recently reallocated to emerging technologies in this rule making

proceeding.^{2/} These systems are used to ensure the safe processing and refining of petroleum and natural gas, and to expedite the ultimate delivery of these products to commercial, industrial and residential customers. Accordingly, API is vitally concerned about the reallocation of this spectrum to emerging technologies and any proposals involving the displacement of the incumbent licensees of this spectrum.

II. BACKGROUND

3. This Further Notice responds to the Petitions for Rule Making filed by the Utilities Telecommunications Council^{3/} and by Alcatel Network Systems, Inc.^{4/} The Commission, in the initial Notice of Proposed Rule Making^{5/} in this proceeding, while identifying the bands above 3 GHz as a new home for OFS users displaced from the 2 GHz band, did not propose specific channelling plans or technical

^{2/} First Report and Order and Third Notice of Proposed Rule Making, ET Docket No. 92-9, FCC 92-437, Released October 16, 1992.

^{3/} RM-7981

^{4/} RM-8004

^{5/} Notice of Proposed Rule Making, ET Docket No. 92-9, FCC 92-20, released February 7, 1992.

standards for these bands. Rather, it stated that 2 GHz users would be given a blanket waiver of existing rules for use of the bands above 3 GHz. UTC and Alcatel filed their Petitions because both were concerned that, without specific rules, migration of the 2 GHz users to other bands would be difficult to implement and would lead to inefficient use of the spectrum. Both UTC and Alcatel contended that the Commission should not mandate vacation of the 2 GHz band by incumbent licensees unless and until the agency adopted specific rules to allow these users to operate in other bands, including the bands above 3 GHz. Additionally, UTC urged the Commission to allocate spectrum below 3 GHz, specifically the band 1.71-1.85 GHz, for use by 2 GHz users because the bands above 3 GHz would not be suitable for all of the current needs of certain licensees.

4. API submitted a Statement in Support of each of these Petitions for Rule Making. Even though API supported the reallocation and channelization plans set forth by UTC and Alcatel, API reiterated its position that the Commission should not reallocate the 2 GHz spectrum for emerging technologies because there are other spectrum alternatives available to the Commission which have not been adequately examined. Further, API contended that, from a technical point of view, the 2 GHz spectrum is not ideal for a

technology such as PCS. However, faced with the prospect of being forced to move to other spectrum to meet critical telecommunications requirements, API found the measures proposed by UTC and Alcatel, by and large, to be necessary in order to adequately reaccommodate existing and future private microwave licensees. Finally, API urged the Commission to take expeditious action in adopting the measures proposed, and to delay any allocation decisions in regard to emerging technologies until the reaccommodation issues have been addressed.

5. Contrary to API's recommendations, the Commission reallocated the 2 GHz band for emerging technologies, and concurrently adopted this Further Notice to address the reaccommodation issues. The Commission has proposed in the Further Notice to adopt Alcatel's reallocation and channelization proposals, excluding the proposal in regard to the 3.6-3.7 GHz band and the 80 MHz of spectrum in the 4 GHz band currently allocated to the Fixed Satellite Service (FSS). The agency disagreed with Alcatel that the band 3.6-3.7 GHz could accommodate additional non-government users. Further, the Commission found that the requirements of the FSS outweigh the needs of fixed terrestrial users for an exclusive primary allocation of 80 MHz in the 4 GHz band. Finally, the Commission found that the proposed

reallocations were sufficient to meet the needs of the 2 GHz fixed microwave users, and perceived no reason to delay the reallocation of the 2 GHz band pending negotiation with National Telecommunications and Information Agency (NTIA) for access by non-government licensees to the 1.71-1.85 GHz government band.

6. The Commission has proposed to adopt the channelization plans and technical requirements set forth in Alcatel's petition, except for the coordination procedures proposed by Alcatel. Alcatel had proposed that the Part 21 coordination standards be applied to all bands. With respect to these procedures, the Commission proposed to adopt UTC's suggestion that the current coordination procedures for each band be maintained because it would cause less disruption to the existing users in each of these bands.

III. COMMENTS

7. API continues to dispute both the need for allocation of 1850-2200 MHz for emerging technologies and the amount of spectrum which the Commission has designated for these new technologies. This band is best suited for terrestrial fixed microwave services, as previously

allocated. In light of the Commission's action in reallocating the spectrum, however, API recognizes that private microwave licensees will be forced to other frequency bands in the near future. Accordingly, API supports the measures proposed in the Further Notice. API appreciates the role that Alcatel has taken in developing proposals to accommodate the needs of private microwave users. API also recognizes that there may be other manufacturers who wish to continue to support this market. API recognizes that the Commission's current proposal is based primarily on the initiative that Alcatel has taken to fashion a workable replacement channelization scheme for private microwave users. API urges the Commission to base any final channelization plan on meeting the twin goals of spectrum efficiency and maximum marketplace competition. These objectives will best serve the public interest.

A. Sharing of Common Carrier and Private Microwave Allocations

8. As a general rule, consistent with good engineering practices, API favors maximum flexibility for microwave system users in selecting the most efficient bandwidth and the specific frequency band best suited for their needs. API believes that the proposals set forth in the Further Notice will generally increase the flexibility

available to microwave system licensees and will provide a useful range of options for selecting the optimum bandwidth for some microwave applications.

9. The Commission's traditional approach to allocation of the microwave spectrum has been to designate specific blocks of frequencies for each of the radio services requiring spectrum. In API's view, this traditional approach has worked well. However, API also recognizes that, with the reallocation of the 2 GHz band for emerging technologies, microwave licensees no longer have the luxury of discrete allocations of spectrum for individual radio services. We concur with the Commission's assessment that the proposals in the Further Notice may not be ideal for either private users or common carriers, but these proposals are a viable compromise for both classes of users. Under the circumstances, the sharing of microwave spectrum between common carrier and private radio services represents a useful approach. API therefore supports adoption of this aspect of the Commission's proposal.

10. While API generally supports private microwave access to the common carrier microwave bands, it is very concerned that the Commission not impose onerous antenna standards on private microwave system operators. The

Part 94 eligibles should be able to continue to use antennas meeting the minimum standards set forth in Section 94.75 of the Commission's rules. Common carriers licensed under Part 21 of the Commission's rules are generally required to use larger antennas. If private microwave users were likewise required to use these types of antennas they may very likely be faced with a situation where the towers now used for their microwave paths would have to be replaced because they could not support the typically heavier common carrier antenna. This would force microwave users to either replace tower structures (which may not be feasible in many cases), or seek new antenna sites which may also be very difficult in many areas of the country. Therefore, the Commission is strongly urged to continue existing Part 94 standards for antennas. This practice would not preclude antenna upgrades in cases where use of a larger antenna is the only alternative in order to engineer a path in a congested area. Nevertheless, Part 94 standards should continue to be required for normal situations.

B. Rechannelization of Frequency Bands

11. API is supportive of the Commission's proposal to rechannelize the frequency bands below 11,700 MHz to accommodate low density and medium density requirements. API believes the proposed channelization scheme offers the potential for improving spectrum efficiency.

C. Proposals for Restructuring Individual Frequency Bands

3700-4200 MHz

12. This band is currently used for common carrier fixed satellite and point-to-point communications. Under the Commission's proposal, this band would be reallocated on a co-primary basis for use in the Private Operational-Fixed Microwave Service. The band would be rechannelized in overlapping bandwidths of 400 kHz, 800 kHz, 1600 kHz, 5 MHz, 10 MHz and 20 MHz. API supports this proposed change and believes that it will give its members the flexibility to accommodate different system requirements.

5925-6425 MHz

13. This band is currently allocated for common carrier point-to-point and satellite transmissions. The Commission's proposal contemplates that these frequencies

would be made available for both common carrier and private point-to-point radio systems on a co-primary basis. The band would be rechannelized for terrestrial systems in overlapping bandwidths of 400 kHz, 800 kHz, 1600 kHz, 5 MHz, 10 MHz and 30 MHz. Again, this proposal reflects a flexible accommodation for point-to-point microwave users who would be displaced from the 2 GHz band, and API supports adoption of the proposal.

6525-6875 MHz

14. This band is currently allocated exclusively for Private Operational-Fixed Microwave Systems. The Commission would open this band for use by point-to-point common carrier systems on a co-primary basis. A similar channelization plan as proposed for the above-discussed band would also be implemented for this frequency band. In view of the fact that the uses would be complementary, i.e., private point-to-point systems with common carrier point-to-point systems, API believes that this is a reasonable accommodation for common carriers who may also be displaced from the 2 GHz band.

10,550-10,680 MHz

15. Digital Termination Systems (point-to-multipoint) are allocated 100 MHz in this band. In the Commission's

rechannelization plan, these point-to-multipoint channels are redesignated for common carrier and private microwave point-to-point systems. The band would be rechannelized in overlapping bandwidths of 400 kHz, 800 kHz, 1.25 MHz, 1.6 MHz, 2.5 MHz, 3.75 MHz, and 5 MHz. Given the relatively light use of this spectrum for Digital Termination Systems, API supports the rechannelization of this band for private and common carrier microwave point-to-point systems.

10,700-11,700 MHz

16. This band is currently designated for common carrier point-to-point systems. As accommodation to private licensees displaced from the 2 GHz band, this band would be redesignated on a co-primary basis for use by both private microwave and common carrier microwave systems. The band would be rechannelized in overlapping bandwidths of 10 MHz and 30 MHz. While the frequencies in the higher range are unlikely to be suitable replacement spectrum for 2 GHz links, there are some instances where API member companies will be able to meet short-range requirements in this spectrum. Therefore, API supports allowing private microwave licensees access to this spectrum.

D. Access to the Frequencies at 3600-3700 MHz by Private Radio and Common Carrier Licensees

17. Many of the systems currently licensed in the 2 GHz band simply cannot be accommodated in the spectrum at 6 GHz and above. A large percentage of the systems which have been established at 2 GHz by petroleum and natural gas entities operate over paths that stretch for 40 miles or more. It is imperative that frequency bands below 6 GHz be made available to accommodate the long distance requirements of private operational-fixed microwave licensees.

18. API regarded the 3600-3700 MHz band as an excellent accommodation for these longer distance requirements. Nevertheless, the Commission failed to propose reallocation of this band because of NTIA objections. API continues to adhere to its position that many of the higher frequency bands proposed to accommodate the private microwave users are not capable of transmitting over the longer distances which are often required by private fixed microwave users. The band 3600-3700 MHz must be included as one element of the Commission's overall effort to provide meaningful relief for licensees who would otherwise continue use the 2 GHz band. API strongly urges the Commission to change its position in regard to this band

and to encourage NTIA to open this band for reaccommodation of 2 GHz licensees.

IV. CONCLUSION

19. API reiterates its position that the Commission's action in reallocating the 2 GHz spectrum for emerging technologies was ill-advised, especially without resolving the question of exactly how displaced users will be reaccommodated. In light of the Commission's action, however, API generally supports adoption of the Commission's proposals as set forth in the Further Notice and urges the Commission to expedite implementation of a plan to allow POFS users access to replacement spectrum.

WHEREFORE, THE PREMISES CONSIDERED, the American Petroleum Institute urges the Commission to take expeditious action in this proceeding in a manner consistent with the views expressed in the foregoing Comments.

Respectfully submitted,

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